

REMARKS

Interview

Examiner Krause and Examiner Hendrick are thanked for conducting an interview with Applicants' representative on December 10, 2009 regarding the present application. Applicants' representative sought to better define the claimed invention for the Examiners, explaining that the claimed invention is directed to xanthan gum particles coated with a potassium salt. Examiner Hendrick asked that Applicants cite specific support for any claim amendments made in response to the outstanding Office Action.

Status of the Claims

Applicants are co-filing a Request for Continued Examination herewith. Upon entry of the instant amendment, claims 1-5 and 7-11 are pending in the above-identified application and stand ready for further action on the merits.

In this Amendment, claims 1-5, 7 and 8 have been amended and claim 6 has been cancelled without prejudice or disclaimer of the subject matter contained therein. New claims 10 and 11 have been added.

Amendment of claim 1 is at least supported by page 5, paragraph 14, and pages 5-6, paragraph 15, of the Specification; Example 1; and original claim 2. Dependent claims 2-4, 7 and 8 have been amended to conform to the language of amended independent claim 1. Claim 5 has been amended to put it in better form. New claims 10 and 11 are at least supported by pages 3-4, paragraph 13, page 5, paragraph 14, pages 5-6, paragraph 15, and page 7, paragraph 17, of the Specification; Example 1; and Test Example 2.

Accordingly, the present amendments to the claims do not introduce new matter into the application as originally filed. As such entry of the instant amendment and favorable action on the merits is earnestly solicited at present.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-8 are finally rejected under 35 U.S.C. § 102(b) as being anticipated by Takenawa et al., partial translation of JP PN 10204408 (hereinafter referred to as “Takenawa”). As claim 6 has been cancelled, its rejection is now moot. Applicants respectfully traverse the rejection of claims 1-5, 7 and 8 as being anticipated by Takenawa.

Takenawa cannot anticipate the claimed invention, because Takenawa does not teach xanthan gum particles coated with a potassium salt, as in the claimed invention. Rather, Takenawa merely teaches dry-mixing a low-water soluble substance (*i.e.*, xanthan gum) with an alkali metal salt of gluconic acid to produce a mixture of particles of the low-water soluble substance with salt particles. As explained in the present Specification at page 4, paragraph 9, the claimed invention provides an improved viscosity that is not found in a blend produced by “powder-blending a xanthan gum with a potassium salt powder,” as disclosed by Takenawa.

Takenawa, in describing the prior art, acknowledges that low-water soluble substances (such as xanthan gum) have been premixed with other ingredients in advance of their use in the manufacture of food products, but characterizes such premixing methods as undesirably complicated. (*See*, partial translation of Takenawa provided by the USPTO at page 5.) Thus, Takenawa seeks to improve dispersion of low-water soluble substances by minimal manipulation of the substances (*i.e.*, simple dry-mixing of xanthan gum with an alkali metal salt of gluconic acid) prior to their addition to food products.

Potassium salt coatings, as in the claimed invention, require relatively more manipulation of xanthan gum particles than taught by Takenawa. As discussed above, Takenawa teaches away from premixing steps that are more complex than merely dry-mixing a low-water soluble substance with an alkali metal salt of gluconate.

Claim 2 illustrates that the level of manipulation required to provide a potassium salt coating of xanthan gum particles of the claimed invention. Takenawa teaches away from such extensive manipulation of xanthan gum prior to its use in food manufacture. (*See*, partial translation of Takenawa provided by the USPTO at page 5.)

As Takenawa does not teach every element of the claimed invention, and, in fact, teaches away from the claimed invention, Applicants respectfully request that the rejection of claims 1-5, 7 and 8 as being anticipated by Takenawa be withdrawn.

Claim Rejections Under 35 U.S.C. § 103

Claim 5 remains rejected under 35 U.S.C. § 103(a) as being unpatentable over Takenawa in view of Marrs et al., U.S. Patent 5,633,030 (hereinafter referred to as “Marrs”). Applicants respectfully traverse.

Marrs is relied on as teaching that xanthan gum can be incorporated into a foodstuff. However, Marrs does nothing to overcome the deficiencies of Takenawa, as discussed above. Takenawa and Marrs taken alone or together do not teach xanthan gum particles coated with a potassium salt, as in the claimed invention. Applicants respectfully request that the rejection of claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Takenawa in view of Marrs be withdrawn.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Takenawa in view of Almond, U.S. Patent 4,487,866 (hereinafter referred to as “Almond”). Applicants respectfully traverse.

Takenawa and Almond taken alone or together do not teach a xanthan gum particle coated with a potassium salt such that when said coated xanthan gum particles are subjected to a 30-second vibration in a 60-mesh JIS standard sieve having an inner diameter of 150 mm at a vibration width of 2 to 3 mm and 3600 counts/min, the coated xanthan gum particles crushed by vibration that pass through the sieve are 20% by weight or less.

Furthermore, Almond is directed to compositions for acidizing and/or fracturing underground rock formations for the production of oil and gas, while Takenawa is directed to compositions comprising low-water soluble substances for use in food products. One skilled in the art would not be motivated to combine two references from such unrelated fields. In fact,

Almond teaches compositions comprising salts (*i.e.*, lithium chloride), which would be inappropriate and unsafe for use in general food products.

As discussed above, Takenawa teaches away from premixing of low-water soluble substances (*i.e.*, xanthan gum) with other non-salt components before manufacture of food products. Almond teaches, as part of preparing an acidizing and/or fracturing composition, premixing of an anionic polymer (*i.e.*, xanthan gum) with a cationic or amphoteric polymer, and addition of a salt only when the cationic or amphoteric polymer content of the mixture falls within a given range. Thus, Takenawa teaches away from Almond, not only because Almond's methods are not directed to/appropriate for food manufacturing, but also because Almond's methods require premixing of an anionic polymer with a cationic or amphoteric polymer.

In the Office Action it is stated that "[o]ne having ordinary skill in the art at the time of the invention would find it obvious to substitute potassium gluconate for potassium chloride, as such a modification would require only the substitution of one known hydration improver for another." (Office Action at pages 3-4.) However, this blurs the distinctions between the concepts of hydrating a polymer and dispersing a polymer to increase the viscosity of a solution containing it.

Almond teaches that "[t]he cationic or amphoteric polymer causes the anionic polymer to become more readily dispersible in an aqueous liquid." (Almond at col. 3, lines 39-41.) Thus, Almond relies on cationic or amphoteric polymers, not salts (as taught by Takenawa), to improve dispersion of an anionic polymer, such as xanthan gum, and increase viscosity of a composition. Almond only teaches the use of salts to help hydrate an anionic polymer in compositions having a cationic or amphoteric polymer in an amount from 25% by weight to 75% by weight of the anionic polymer. Takenawa does not teach compositions of an anionic polymer and a cationic or amphoteric polymer, where the cationic or amphoteric polymer is present in an amount from 25% by weight to 75% by weight of the anionic polymer. Thus, it would not have been obvious to one of skill in the art at the time of the invention to substitute potassium chloride taught by Almond for the potassium gluconate used in compositions taught by Takenawa, as suggested in

the Office Action. Applicants respectfully request that the rejection of claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Takenawa in view of Almond be withdrawn.

Conclusion

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Stephanie A. Wardwell, Reg. No. 48,025, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: December 18, 2009

Respectfully submitted,

By 

Craig A. McRobbie
Registration No.: 42,874
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road, Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicants